

**Amendments To The Claims:**

This listing of claims will replace all prior versions of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An antibody-based fusion protein comprising an N-terminal immunoglobulin (Ig) chain linked to a C-terminal non-Ig protein, the C-terminal non-Ig protein comprising an amino acid alteration to a hydrophobic or non-polar amino acid within 10 amino acids of the N-terminus of the C-terminal non-Ig protein, wherein said antibody-based fusion protein comprises at least one of:

a) an amino acid alteration within 10 amino acids from the C terminus of said N-terminal Ig chain; or,

b) an amino acid alteration within 10 amino acids from the N terminus of said C-terminal non-Ig protein;

and wherein said antibody-based fusion protein has a longer circulating half-life *in vivo* than a corresponding antibody-based fusion protein without said amino acid alteration.

2. (Currently amended) The antibody-based fusion protein of claim 1, 48, 49, or 51, wherein said amino acid alteration increases the hydrophobicity of said antibody-based fusion protein.

3. (Cancelled)

4. (Currently Amended) The antibody-based fusion protein of claim 48, 49, or 51, or 2 wherein said alteration changes the C-terminal amino acid of the Ig chain.

5. (Currently Amended) The antibody-based fusion protein of claim 1, wherein said non-Ig protein is a secreted protein.

6. (Currently Amended) The antibody-based fusion protein of claim 5, wherein said non-Ig protein is a mature form of said secreted protein.

7. (Currently Amended) The antibody-based fusion protein of claims 1, 48, 49, or 51, wherein the Ig chain comprises part of an Ig heavy chain.
8. (Currently Amended) The antibody-based fusion protein of claim 48, 49, or 51,<sup>7</sup> wherein the Ig chain comprises at least the CH2 domain of an IgG2 or an IgG4 constant region.
9. (Cancelled)
10. (Cancelled)
11. (Original) The antibody-based fusion protein of claim 7, wherein said portion of heavy chain further has binding affinity for an immunoglobulin protection receptor.
12. (Previously Presented) The antibody-based fusion protein of claim 7, wherein said Ig chain has substantially reduced binding affinity for a Fc receptor selected from the group consisting of Fc $\gamma$ RI, Fc $\gamma$ RII and Fc $\gamma$ RIII, when compared to the binding affinity of an unaltered IgG1 for said Fc receptor.
13. (Currently Amended) The antibody-based fusion protein of claim 17, wherein said non-Ig protein is selected from the group consisting of a cytokine, a ligand-binding protein, and a protein toxin.
14. (Original) The antibody-based fusion protein of claim 13, wherein said cytokine is selected from the group consisting of a tumor necrosis factor, an interleukin, and a lymphokine.
15. (Original) The antibody-based fusion protein of claim 14, wherein said tumor necrosis factor is tumor necrosis factor alpha.
16. (Original) The antibody-based fusion protein of claim 14, wherein said interleukin is interleukin-2.
17. (Original) The antibody-based fusion protein of claim 14, wherein said lymphokine is a lymphotoxin or a colony stimulating factor.

18. (Previously Presented) The antibody-based fusion protein of claim 17, wherein said colony stimulating factor is a granulocyte-macrophage colony stimulating factor.

19. (Original) The antibody-based fusion protein of claim 13, wherein said ligand-binding protein is selected from the group consisting of CD4, CTLA-4, TNF receptor, and an interleukin receptor.

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Currently Amended) The fusion protein of claim 1, 48, 49, or 51, further comprising a linker between said Ig chain and said non-Ig protein.

25. (Currently Amended) The fusion protein of claim 1, 48, 49, or 51, ~~2, 5, 6, or 7~~, wherein said alteration is a substitution of one or more amino acids.

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Currently Amended) The fusion protein of claim 1 further comprising a first mutation in the C-terminal portion of said first polypeptide and a second mutation in the N-terminal portion of said second polypeptide ~~an amino acid alteration to a hydrophobic or non-polar amino acid within the Ig chain~~.

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Currently Amended) The fusion protein of claim 148 wherein said Ig chain is IgG1.

35. (Currently Amended) The fusion protein of claim 1 wherein said alteration is a point mutation[selected from the group consisting of point mutations, deletions, insertions, and rearrangements].

36. (Previously Presented) The fusion protein of claim 4 wherein the C-terminal amino acid of said N-terminal Ig chain is altered to be an amino acid with a non-ionizable side chain.

37. (Original) The fusion protein of claim 36 wherein said C-terminal residue is a non-lysine amino acid.

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Currently Amended) The fusion protein of claim 145, 48, 49, or 51, wherein said hydrophobic or non-polar amino acid is selected from the group consisting of Leu, Trp, and Gly.

47. (Currently Amended) The fusion protein of claim 146, wherein said hydrophobic or non-polar amino acid is Ala.

48. (New) An antibody-based fusion protein comprising an N-terminal immunoglobulin (Ig) chain linked to a C-terminal non-Ig protein, wherein the Ig chain is an IgG1, IgG2, IgG3, IgG4, IgA, IgM, IgD, or IgE chain comprising an amino acid alteration to a hydrophobic or non-polar amino acid within 10 amino acids from the C-terminus of the Ig chain, wherein said antibody-based fusion protein has a longer circulating half-life *in vivo* than a corresponding antibody-based fusion protein without said amino acid alteration.

49. (New) An antibody-based fusion protein comprising an N-terminal immunoglobulin (Ig) chain linked to a C-terminal non-Ig protein, the Ig chain comprising an IgG1, IgG2, IgG3, IgG4, IgA, IgM, IgD, or IgE constant domain and an amino acid alteration to a hydrophobic or non-polar amino acid within 10 amino acids from the C-terminus of the Ig chain, wherein said antibody-based fusion protein has a longer circulating half-life *in vivo* than a corresponding antibody-based fusion protein without said amino acid alteration.

50. The antibody-based fusion protein of claim 49 wherein the constant domain comprises one or more of a CH1, CH2, or CH3 domain.

51. (New) An antibody-based fusion protein comprising an N-terminal immunoglobulin (Ig) chain linked to a C-terminal non-Ig protein, the Ig chain comprising an amino acid sequence that is non-natural within 10 amino acids from its C-terminus, the non-natural amino acid sequence comprising an amino acid alteration to a hydrophobic or non-polar amino acid, wherein the antibody-based fusion protein has a longer circulating half-life *in vivo* than a corresponding antibody-based fusion protein without said amino acid alteration.

52. (New) The antibody-based fusion protein of claim 51 wherein the Ig chain is an IgG1, IgG2, IgG3, IgG4, IgA, IgM, IgD, or IgE chain.

53. (New) The antibody-based fusion protein of claim 4, wherein the Ig chain comprises the CH2 domain of the IgG2 constant region and the C-terminal amino acid is a lysine.

54. (New) The antibody-based fusion protein of claim 53, wherein the C-terminal amino acid lysine is altered to an alanine.

55. (New) The antibody-based fusion protein of claim 53, wherein the non-Ig protein is a cytokine.